Four Variable Predicate Calculus for Boolean Valued Functions. Part II

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Summary. In this paper, we proved some elementary predicate calculus formulae containing the quantifiers of Boolean valued functions with respect to partitions. Such a theory is an analogy of ordinary predicate logic.

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The articles [5], [4], [7], [6], [3], [1], and [2] provide the notation and terminology for this paper.

For simplicity, we adopt the following rules: Y is a non empty set, a is an element of $Boolean^Y$, G is a subset of PARTITIONS(Y), and A, B are partitions of Y.

Next we state the proposition

(4)[1] $\quad \forall_{\neg \exists_{a,A} G, B} G \Subset \neg \exists_{\forall_{a,B} G, A} G$.

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[1] The propositions (1)–(3) have been removed.

[7] Edmund Woronowicz. Many-argument relations. *Journal of Formalized Mathematics*, 2, 1990. `http://mizar.org/JFM/Vol2/margrel1.html`.

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